

Videoconference Interviews for Admission to a Pediatric Residency Program during the COVID-19 Pandemic: Candidates' Perspectives

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Abstract

With the emergence of Covid-19 pandemic, understanding the effectiveness of videoconference interviews as an alternative to face-to-face interviews in the research process has become necessary. This study investigated the effectiveness of videoconference interviews, adopted due to the COVID-19 pandemic, in the selection process for a pediatric residency program from candidates' perspectives. The Zoom videoconferencing application was used for online interviews with all candidates. A post-interview questionnaire survey developed using Google Forms was conducted through email to identify their perspectives on the various aspects of the videoconference interview method, including communication, convenience, and interview-related stress. Most participants found videoconference interviews using the Zoom application accessible and convenient and reported that both verbal and nonverbal communications were clear. The videoconferencing format and the pre-interview meeting with the Residency Training Program director were reported to reduce interview-related stress. Most participants considered videoconferencing a suitable substitute for face-to-face interviews. Major obstacles were related to internet connection speed, the time limit on the free version of the Zoom application and securing a quiet environment conducive to interviews. So, videoconference interviews are an effective alternative to face-to-face interviews from the candidates' perspectives. Internet speed connection and interview environment play an important role in conducting interviews. A meeting platform should ensure high bandwidth, synchronicity, privacy, and security. Future studies should consider interviewers' perspectives on videoconference interviews.

Keywords

Videoconference interviews; Residency selection process; Face-to-face interview; Online interviews

Introduction

The national pediatric residency program in Saudi Arabia is a four-year training program that begins with candidate selection under the supervision of the Saudi Commission for Health Specialties (SCFHS). The selection is conducted through a matching system that receives the documents and curriculum vitae of all applicants and evaluates them according to a specific scoring system. The residency selection process is important for the identification of applicants who are academically prepared to begin training and who will be successful in passing the board exams^[1]. Training centers participate in this process by interviewing all applicants in order to generate a priority list or ranked list. Applicants can also provide a ranked list of preferred training centers. Then, a computer algorithm assigns applicants to specific training centers based on ranked lists of both applicants and training centers, which is a process quite similar to that of the Canadian Resident Matching Service^[2]. These interviews are conducted in each center in a manner convenient for both the center and its applicants, most of the time through face-to-face interviews. In particular, at King Abdulaziz University Hospital (KAUH), all applicants have traditionally needed to be physically present for interviews.

With the COVID-19 outbreak that began in early February 2020, the World Health Organization's recommendations for maintaining social distance and avoiding crowds^[3] have been emphasized by the Saudi Arabian government and the Saudi Ministry of Health. Accordingly, the SCFHS has instructed training centers to avoid face-to-face interviews and switch to other modalities. As one such alternative, videoconference interviewing was selected because it is a method that can be used easily in a high-volume context^[1], in addition to allowing candidates to attend interviews with little or no absence from school and allowing them to save money by not traveling to participate in on-site interviews^[4,5]. Moreover, standardized video interview scores are reliable and comparable across applicants^[1]. In addition, most communication skills can be assessed during video interviews: both nonverbal behaviors (e.g., eye contact, smiling, body language, hand movements, and physical appearance) and verbal skills^[6].

This study aimed to investigate the effectiveness of videoconference interviews in the selection process

of the KAUH pediatric residency program from the candidates' perspectives. To this end, a post-interview questionnaire survey of candidates was conducted to identify their perspectives on various aspects of the videoconference interview method, including communication, convenience, and interview-related stress^[7].

Methods

Altogether, 113 candidates for the pediatric residency program at KAUH underwent videoconference interviews. The participants in our study were the 109 applicants who responded to the post-interview questionnaire. Following submission of the research proposal to the KAUH Ethical Approvals Committee, the need for ethical approval was waived.

After the applicants had submitted their curriculum vitae and documents to SCFHS through a matching system, a list of candidates was generated based on their scores and sent to all training centers to organize the interviews. The Zoom videoconferencing platform was used for the online interviews because it is easy to use and affordable (free for a limited time).

A few days before the interviews, clear instructions were sent by email to all candidates, including detailed instructions on how to download and sign up for the Zoom meeting application as well as a YouTube usage video prepared by a KAUH staff member^[8]. One day before the start of the interviews, the Residency Training Program Director (RTP) conducted an online meeting (hereinafter referred to as the "RTP meeting") with all applicants using the Zoom videoconferencing application to emphasize instructions and procedures, in addition to reassuring them about the use of the platform and the conduct of the interview.

The interviews took place over three days, with an additional day being offered to candidates who missed their scheduled interview. The day before the interview, an email was sent to each candidate indicating the interview time. Once the candidate logged in to the platform, he/she remained in a virtual waiting room until the interviewer allowed him/her to enter the meeting room for the interview. At the end of the interview, the meeting ended either with the candidate leaving the meeting room or with the interviewer ending the candidate's participation.

Upon completion of all interviews, an online questionnaire prepared by the author using the Google Forms application was sent by email to all applicants who had undergone the online interviews, with a clear statement saying that participation in the questionnaire survey was voluntary. Participation itself was therefore considered to represent consent and agreement to be part of the study. The questionnaire was designed to assess the effectiveness of videoconference interviews as a substitute for face-to-face interviews. Two weeks after the questionnaire submission deadline, data were collected and analyzed using descriptive analysis supported by the Google Forms application.

Results

Demographics

Of the participants, 57.8% were women, and almost 90% were between 24 and 27 years old. Most applicants had graduated in the 2019-2020 academic year (80%), while 8% had graduated in the prior academic year, and a few had graduated in earlier years.

RTP Meeting

Approximately 96% of the candidates attended the RTP meeting. Of those who attended, 92% considered it appropriate to conduct this meeting the day before the start of the interviews, and 96% agreed that the explanation provided by the RTP about the interview dynamics and the Zoom meeting application was sufficient. In addition, 95% of the respondents found the email containing instructions regarding the interview and the use of the Zoom application very helpful.

Videoconference Interview

Of the total respondents, 89% believed that the videoconference interview allowed for the choice of a convenient time to conduct the interview, while 96% considered the videoconference interview to be easily accessible. These results indicate that the Zoom meeting application is an appropriate choice for this type of interview. However, 16% reported waiting in the virtual room before the interview as a problem, although such a wait is also common in face-to-face interviews. As for communication, both the interviewer and the interviewees engaged in verbal and nonverbal communication during the interview. Approximately 88–90% of respondents considered body language and eye contact with the interviewer to be clear, and 89% responded that verbal communication with the interviewer was clear.

The pre-interview online meeting with the RTP through the Zoom platform reduced interview-related stress in 81% of the respondents, while 15% were neutral in this regard (and only 4% disagreed). The videoconference interview reduced interview-related stress for 85% of the respondents, while 14% were neutral in this regard; only one respondent felt that this type of interview did not change interview-related stress (Table 1). The Internet connection speed was the major obstacle (43% of the respondents), followed by the limited time of 40 minutes in the free version of the application that required them to log in again during the interview (33%) and interpersonal communication with the interviewer and the environment arrangement (i.e., physical setting) (25%).

Table 1. Questionnaire items and results

Question	Strongly Agree No./%	Agree No./%	Neutral No./%	Disagree No./%	Strongly Disagree No./%
Videoconferences allow a convenient time for interviews	63/57.8	35/32.1	7/6.4	4/3.7	0/0
It is simple to access the interview through the Zoom application	72/66.1	33/30.3	4/3.7	0/0	0/0
Staying in the waiting room before the interview was not a problem	29/26.6	38/34.9	24/22	13/11.9	5/4.6
The interaction with the interviewer in the form of body language was clear	36/33	44/40.4	17/15.6	11/10.1	1/0.9
The interaction with the interviewer in the form of eye contact was clear	42/38.5	43/39.4	10/9.2	12/11	2/1.8
The verbal interaction with the interviewer was clear	64/58.7	34/31.2	8/7.3	2/1.8	1/1.8
Videoconferencing reduces interview-related stress	61/56	32/29.4	15/13.8	0/0	1/0.9
The Zoom meeting with the RTP reduced stress for videoconferencing	64/58.7	25/22.9	17/15.6	3/2.8	0/0
The email containing instructions on the interview and the use of the Zoom application was helpful	72/66.1	31/28.4	5/4.6	0/0	1/0.9
The videoconferencing interview has a convenient environment	49/45	49/45	10/9.2	0/0	1/0.9

Interview Experience

Almost half of the respondents had attended a communication course, while 83% had undergone an admission interview before; 80% of the respondents had already experienced videoconference interviews before, while 60% had attended face-to-face interviews, and only 6.5 % had undergone telephone interviews.

While 90% (81 respondents) believed that videoconferencing is generally convenient, 26% (33 respondents) thought that it was not a good substitute for face-to-face interviews because they would have preferred a more formal environment and interaction with the interviewer during the process, which they found poor in the online format (66%, 22/33 respondents). The majority felt that videoconference interviews are a good substitute, mainly because they are less stressful (87%, 71/81 respondents), have a convenient environment (55%, 45/81 respondents), and allow good interaction with the interviewer (27%, 22/81 respondents). Only a few candidates mentioned that the online interview spared them the cost of traveling to the interview location and saved the time it would take to attend the interview.

Discussion

The emergence and availability of information and communications technology, including high-speed Internet and electronic devices with installed cameras, have facilitated the introduction of online interaction in various parts of our lives as a substitute for face-to-face interactions. In the presence of high-speed Internet, tablets, and smartphones, videoconference interviews are acceptable substitutes for face-to-face interviews^[9]. Online interviews can be conducted synchronously or asynchronously. Asynchronous (non-real-time) interviews can be conducted by emails, through discussion groups, or on bulletin boards, while synchronous (real-time) interviews are commonly held using instant messenger protocols, text-based chat rooms, and videoconferencing^[10-12].

Bandura described efficacy as a general capability that includes interrelated sub-skills such as social, behavioral, emotional, and cognitive skills^[13]. People with high self-efficacy are capable of handling difficult situations better than those with low self-efficacy because they see these situations as opportunities to improve themselves; in contrast, those with low self-efficacy see these situations as threatening and,

therefore, prefer to avoid them^[14]. On the basis of this theory, Oktug found that applicants who prefer online interviews have higher self-efficacy levels compared to those who prefer face-to-face interviews and are preferred in training programs, which makes videoconferencing an effective tool for candidate ranking^[15].

The presence of the following two features should be ensured in choosing media for conducting online interviews. The first is media bandwidth, which reflects the number of different cues or signals that the media transmit. Low-bandwidth media transmit only auditory channels, while high-bandwidth media transmit both visual and auditory channels. The second is synchrony, which refers to receiving, interacting, and sending back the signal without delay^[16]. As it enables real-time messaging and high-definition video and audio, because of its high bandwidth and synchronicity, the Zoom videoconferencing application was used in the interviews for this study; other Zoom features of benefit included content sharing, privacy, security, support for most electronic devices and platforms, and scheduling features^[17,18]. Despite these advantages, the free version of the application limits meetings to 40 minutes and requires logging into the application again after the time has elapsed, which was a problem for 30% of respondents. However, this obstacle can be overcome by purchasing one of the paid plans suggested by the application or by choosing a more convenient, unlimited application or platform.

During the interviews, several aspects should be taken into consideration, such as communication understanding and conversational fluency, comfort of the interviewer, tranquility of the applicant, likability of the interviewer, interest of the applicant in obtaining the job, self-consciousness, and non-verbal communication^[16]. While some believe that videoconferencing applications using cameras that show only the head and upper body can obscure non-verbal communication skills and body language^[19], most respondents were satisfied with both verbal and non-verbal communication during their videoconference interviews. In addition, respondents stated that the meeting with the RTP using the same platform to be used for the interviews and the clear instructions sent to them via email played an important role in reducing stress during the interviews.

Videoconference interviews have saved candidates from having to take days off from

their medical practice that would be necessary for participation in on-site fellowship interviews^[4,20]. Many programs have successfully adapted their interviews to the videoconference format. For example, a gastroenterology fellowship program compared face-to-face interviews with web-based videoconference (WBVC) interviews and found that 81% of the candidates stated that WBVC interviews met or exceeded their expectations, while 86% stated that WBVC should be an option for fellowship interviews^[9]. Videoconference interviews have also made it possible for applicants to save the money that would be needed for transportation and accommodation. Edje *et al.* verified that applicants who were interviewed *via* Skype saved \$556 on average, compared to those who attended face-to-face interviews, while the residency program itself saved \$5,864 in direct cash costs and indirect salary as well as saving seven days of interviews^[21]. An urology program randomized applicants for videoconference or on-site interviews and found that both candidates and faculty members favored videoconference interviews, which can also be used as a way to decrease the number of applicants undergoing on-site interviews, even if the latter are also maintained^[5]. In addition, videoconference scheduling resolves the applicants' problem of having multiple interviews in different cities^[20]. Through videoconference interviews *via* Skype, a family medicine residency program located in Sleepy Hollow, NY, the United States, was able to conduct 68 additional interviews in 2012-2013, and 50% of the candidates in 2012-2013 were approved, compared to 33% in 2011-2012. This was because the use of Skype allowed access to all applicants at reduced costs, enhanced time management, and provided a more personal overall experience^[22]. The travelling cost and absence from work were not a problem for most of our respondents as most of them are from our provinces and are fresh graduates completing their internship year (the seventh year of their medical school), without a full-time job.

Several studies invalidate the concern that videoconference interviews may affect candidates' chance of acceptance. A study with an anesthesiology residency program found no significant differences in admission rates between candidates who underwent videoconference interviews and those who underwent face-to-face interviews, although the videoconference group reported benefits such as ease of scheduling, no need for travel, and financial savings^[20]. An ophthalmology residency program found no statistically significant difference in the percentage of

the top 25 candidates who had face-to-face interviews and those who had videoconference interviews (48% versus 57%)^[23]. Temple and Lagzdins conducted interviews with postgraduate year 1 (PGY1) applicants for a program at Hillcrest Hospital using Skype and Facetime, which are videoconferencing applications, after reviewing candidates' application documents and assigning them a score for an initial rank^[24]. After completing the videoconference interviews, the study found a positive correlation between obtaining more than 90 points in the initial ranking and a high videoconference interview score. In addition, the videoconference interviews took about 4 hours, while on-site interviews typically take 48 hours; therefore, the online format enabled the program to save 44 hours.

Despite the above benefits, the use of videoconferencing can also have some disadvantages, such as technical issues, low Internet speed, poor sound quality, microphone or webcam malfunction, or delay in live interactions^[25]. Problems with access to high-speed Internet, lack of familiarity with the online platform used for the interview, and lack of digital literacy have also been reported to affect the quality of online interviews^[26]. Surprisingly, such problems were also reported by the participants in this study despite the advanced Internet infrastructure available that includes fiber-optic high speed and 4G cellular Internet connections. Another point of concern is security and privacy when using these videoconferencing applications. Some companies such as Skype have the right to access what is written in or recorded by their application, which is a serious issue in confidential meetings or research, as stated by Sullivan^[25]. Reviewing security and privacy agreements before using any application makes it easy to ascertain the security and privacy of interviews; in this context, analysis of the Zoom application agreements revealed that security and privacy protection when using the platform are ensured by several levels of technical support^[18].

Conclusion

Videoconference interviews are effective alternatives to face-to-face interviews from the candidates' perspectives, as they save time, money, and transportation costs in addition to reducing interview-related stress and ensuring satisfactory verbal and nonverbal communication without any effect on the candidate ranking or chance of program acceptance. However, Internet connection speed and environment

play an important role in conducting interviews. Nevertheless, a meeting platform should be chosen carefully for high bandwidth and synchronicity, to ensure the privacy and security of interviews. Future studies should investigate the use of videoconferencing technologies from the interviewers' perspective, given their crucial role in such interviews.

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Conflict of Interest

The author declared that there is no conflict of interest that is related to this study and this article.

Disclosure

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Ethical Approval

It was waived by KAUH Ethical Committee.

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استخدام المقابلات الشخصية المرئية للمتقدمين لبرنامج زمالة طب الأطفال في خلال جائحة فيروس كورونا من وجهة نظر المتقدمين

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المستخلص. في خلال جائحة كورونا (COVID 19) تم استخدام وسائل التواصل المرئية عن بعد في مجالات عدة ومنها اجراء المقابلات الشخصية. لذلك استخدم برنامج المقابلات المرئية زووم (Zoom meeting application) في المقابلات الشخصية للمتقدمين للمقاعد التدريبية لبرنامج زمالة طب الأطفال بمستشفى جامعة الملك عبد العزيز بمدينة جدة. بعد الانتهاء من المقابلات الشخصية عن بعد تم ارسال استبيان لجميع المتقدمين اللذين حضروا المقابلات لقياس مدى رضاهم عن المقابلة باستخدام طريقة المقابلة المرئية ومرئياتهم من ناحية مهارات التواصل والضغط النفسي في خلال المقابلة ومقارنتها مع المقابلات الحضورية. وقد اوضحت نتائج الاستبيان بأن المقابلات المرئية تغني عن المقابلات الحضورية من وجهة نظر المتقدمين بجميع عناصر التواصل الجسدية والغير جسدية مع تخفيف الضغط النفسي المصاحب للمقابلات الشخصية بصفة عامة. سرعة الانترنت وتوفير بيئة مناسبة لإجراء المقابلة المرئية كانتا من أكثر العوائق في خلال هذا النوع من المقابلات في رأي المتقدمين وقد ارتأى بعضهم أن محدودية الوقت لكل اجتماع في النسخة المجانية من البرنامج ووجودهم في غرفة الانتظار في برنامج المقابلات مزعج مع العلم بوجود هذا النوع من الانتظار في المقابلات الحضورية. وبذلك تم التوصل الى فاعلية المقابلات المرئية عوضا عن المقابلات الحضورية من وجهة نظر المتقدمين مع الأخذ في الاعتبار سرعة الانترنت ووسيلة أو برنامج التواصل المناسب.

الكلمات المفتاحية: المقابلات عبر الفيديو. عملية اختيار الإقامة؛ مقابلة وجهها لوجه المقابلات عبر الإنترنت